DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

STATUS: Effective
POLICY NUMBER: Air-037-NPD
SUBJECT: Treatment of Emergency Stationary Internal Combustion Engines used for Emergency Demand Response and Nonemergency uses.
AUTHORIZED: Thomas W. Easterly, Commissioner
SUPERSEDES: New
ISSUING OFFICE(S): Office of Air Quality
ORIGINALLY EFFECTIVE: November 8, 2013
RENEWED/REVISED:
Disclaimer: This Nonrule Policy Document (NPD) is being established by the Indiana Department of Environmental Management (IDEM) consistent with its authority under IC 13-14-1-11.5. It is intended solely to provide guidance and shall be used in conjunction with applicable rules or laws. It does not replace applicable rules and laws, and, if it conflicts with these rules or laws, the rules or laws shall control. Pursuant to IC 13-14-1-11.5, this policy will be available for public inspection for at least 45 days prior to presentation to the appropriate State Environmental Board and may be put into effect by IDEM 30 days afterward. If the nonrule policy is presented to more than one board, it will be effective 30 days after presentation to the last. IDEM also will submit the policy to the Indiana Register for publication.

1.0 PURPOSE

This NPD outlines how IDEM will apply existing United States Environmental Protection Agency (U.S. EPA) guidance concerning the calculation of PTE for emergency generators in conjunction with recent federal rule revisions that regulate various types of stationary internal combustion engines. The information contained in this NPD will be used not only for permitting determinations but also for advising owners and operators of the potential need for additional air quality review of emergency stationary internal combustion engines used for emergency demand response events and allowed nonemergency situations.

2.0 SCOPE

This policy applies to emergency stationary internal combustion engines that could be used in an emergency demand response program and nonemergency situations and are subject to federal New Source Performance Standards (NSPS) at 40 CFR 60, Subpart IIII or 40 CFR 60, Subpart JJJJ or the National Emissions Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR 63, Subpart ZZZZ.

3.0 SUMMARY

3.1 Emergency generators that operate within the operational restrictions for emergency stationary internal combustion engines contained in the applicable NSPS or NESHAP will still be classified as emergency generators for the purpose of determining PTE pursuant to U.S. EPA's guidance: Memorandum from John S. Seitz, Director of the Office of Air Quality Planning and Standards, U.S. EPA, to Directors of Air and Waste Management Divisions and Air Divisions, Regions I-X, titled "Calculating Potential to Emit for Emergency Generators", dated September 6, 1995 (1995 guidance).

http://www.epa.gov/ttn/caaa/t5/memoranda/emgen.pdf

3.2 Permits for these types of emergency generators may include emission limitations or operational restrictions to protect the ozone, PM2.5, SO_2 and NO_2 National Ambient Air Quality Standards (NAAQS) if the emergency stationary internal combustion engines operate under an emergency demand response program or are operated for allowed nonemergency uses.

4.0 DEFINITIONS

4.1 "Emergency stationary internal combustion engine" means any stationary internal combustion engine or stationary reciprocating internal combustion engine that meets the requirements, as applicable, for emergency use pursuant to 40 CFR 60.4243(d), 40 CFR 60.4211(f), or 40 CFR 63.6640(f).

4.2 "IDEM, OAQ" means the IDEM Office of Air Quality.

4.3 "Nonrule policy" - The term assigned by the IDEM to those policies identified in IC 13-14-1-11.5 as any policy that: A. Interprets, supplements, or implements a statute or rule; B. Has not been adopted in compliance with IC

4-22-2; C. Is not intended by IDEM to have the effect of law; and D. Does not apply solely to the internal IDEM organization (is not an Administrative Policy).

4.4 "Peak shaving" is a process of reducing an electric utility's peak electric demand by reducing electricity use or using local on-site electricity generation by local resources or entities.

4.5 "Potential to emit" or "PTE" means the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the IDEM, or the appropriate local air pollution control agency. The term does not alter or affect the use of PTE for any other purpose under the Clean Air Act (CAA), (or "capacity factor" as used in Title IV of the CAA) or the regulations promulgated thereunder.

4.6 "U.S. EPA" means the United States Environmental Protection Agency

5.0 ROLES

5.1 Companies who operate emergency stationary internal combustion engines pursuant to the applicable NSPS or NESHAP should consult this policy to ensure that the company makes the appropriate permit application and understands how IDEM, OAQ will determine PTE for both the permitting and subsequent operation of the engine. Companies should consult this policy to be aware that additional permit conditions for emergency stationary internal combustion engines may be imposed in order to address NAAQS attainment for ozone, NO2, SO2, and PM2.5

5.2 The IDEM, OAQ Permits Branch and Compliance and Enforcement Branch will use this policy to determine the proper permitting of emergency stationary internal combustion engines that operate as such pursuant to the applicable NESHAP and NSPSs.

6.0 POLICY

6.1 PTE determinations

IDEM, OAQ has used the U.S. EPA 1995 guidance in making permitting determinations and calculating PTE for emergency generators since its publication. IDEM, OAQ has always applied the 1995 guidance as issued and only used the reduced default PTE (500 hours of operation per year) for emergency stationary internal combustion engines that had the sole purpose of providing energy during times when electricity was not available from a utility or to pump water in the case of a fire or flood. The Technical Support Document for each permit IDEM, OAQ issued specifically identified the classification of the generator and the use of 500 hours per year in determining the PTE for the source. If a generator was used for any other purpose other than providing power during electrical outages or to pump water in the case of a fire or flood, the PTE for the generator was based on 8,760 hours of operation per year.

As of April 1, 2013 the federal rules at 40 CFR 60, Subpart IIII, 40 CFR 60, Subpart JJJJ, and 40 CFR 63, Subpart ZZZZ allow the use of emergency stationary internal combustion engines for maintenance checks and readiness testing and for emergency demand response for up to 100 hours per year. In addition, as part of the 100 hours per year, 50 hours per year of nonemergency use is allowed[1].

U.S. EPA has not yet addressed how the changes to the federal provisions for emergency stationary internal combustion engines will impact the 1995 guidance. Because the NSPS and NESHAP allow for expanded uses for emergency stationary internal combustion engines, including "nonemergency" use, it is IDEM, OAQ's policy that a unit that qualifies as an emergency stationary internal combustion engine under the applicable NSPS or NESHAP will be considered to fall within the 1995 guidance for the purpose of calculating PTE (500 hours per year). However, it is also the policy of IDEM, OAQ that if an emergency stationary internal combustion engine is not operated within the operational constraints of the applicable NSPSs and NESHAP and is no longer considered to be an emergency stationary internal engine under the applicable rules, the IDEM, OAQ will consider it a nonemergency stationary internal engine and the PTE for the engine will be based on 8,760 hours of operation per year.

This policy is appropriate because the usage limitations in the federal regulations for operating the emergency stationary internal combustion engines during emergency demand response events (a total of

100 hours per year of which 50 hours may be used for allowed nonemergency situations) are much less than the "worst-case" default PTE of 500 hours per year under the 1995 guidance memo. This policy is also appropriate because the declaration of an Energy Emergency Alert Level 2 means that the potential is high for brownouts or blackouts and represent an emergency situation.

6.2 Air quality issues

The changes to the federal rules for emergency stationary internal combustion engines could cause an increased use of the engines which could impact Indiana air quality. For instance, peak shaving is normally employed when there is increased demand for electricity from utilities due to the increased use of air conditioners on days with high temperatures. These periods also coincide with days where there is higher chance of increased ozone formation and Air Quality Action Days. Emergency demand response events can occur at any time, but are more likely to occur on days with high temperatures. Emergency stationary internal combustion engines are likely to be located at businesses and institutions that are located in urban areas and many of the engines are older, oil-fired units that do not have any air pollution controls installed.

While the applicable NSPS and NESHAP limits the use of emergency stationary internal combustion engines to short periods for emergency demand response and nonemergency use, IDEM, OAQ may need to evaluate potential impacts on the various NAAQS for ozone, NO2, PM2.5, and SO2. In the event that new nonattainment areas are designated in Indiana, IDEM, OAQ will have to develop control measures that may include additional limitations on emergency stationary internal combustion engines that are used for emergency demand response and nonemergency situations.

7.0 REFERENCES

Federal Laws or Rules:

A. 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

B. 40 CFR 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

C. 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

D. Memorandum from John S. Seitz, Director of the Office of Air Quality Planning and Standards, U.S. EPA, to Directors of Air and Waste Management Divisions and Air Divisions, Regions I-X, titled "Calculating Potential to Emit for Emergency Generators", dated September 6, 1995 (1995 guidance).
http://www.epa.gov/ttn/caaa/t5/memoranda/emgen.pdf

8.0 SIGNATURES

Thomas W. Easterly, Commissioner Indiana Department of Environmental Management	Date
Keith Baugues, Assistant Commissioner Office of Air Quality	Date
Carol S. Comer, Assistant Commissioner Office of Legal Counsel	Date

This policy is consistent with Agency requirements.

Quality Assurance Program, Planning and Assessment Indiana Department of Environmental Management	Date

[1] This NPD does not to outline the permissible uses and amounts of time allowed for each use. Companies should become familiar with the NSPS and NESHAP requirements for emergency stationary internal combustion engines if taking advantage of the reduced requirements and PTE calculation. *See* Section 7.0 References.

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